



ABOUT C-STEM CENTER

C-STEM is a UC Approved Educational Preparation Program for Undergraduate Admission for all UC campuses. C-STEM joins a distinguished group of programs with UC A-G Program Status. Schools can easily add the A-G approved rigorous C-STEM curriculum to their own school's A-G course lists to satisfy the UC/CSU admission requirements. The mission of the C-STEM Center is to improve computing, science, technology, engineering, and mathematics in both formal and informal K-14 education.

The C-STEM Center is actively engaged in technology innovation, curriculum development and implementation, and professional development for K-14 STEM teachers guided by two key objectives:

- Close the achievement gap by broadening participation of students traditionally underrepresented in computing and STEM related careers and post-secondary study and prepare all students to be career ready
- Develop 21st Century problem-solving skills to tackle real world concerns through integrated computing and STEM education.

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UC DAVIS COLLEGE OF ENGINEERING FACTS

Undergraduate Students:	3,852
Graduate Students:	1,167
Faculty:	202
CAREER/PECASE Awards to UC Davis Faculty:	48
Research Grants and Contracts:	\$108.1 million (2012)
Research Expenditures:	\$87.1 million (2012)
Alumni:	22,000
Best Undergraduate Engineering Programs (US News, 2013):	#30 (tied)
Best Graduate Engineering Programs (US News, 2013):	#31 (tied)
Engineering Student Organizations:	36+
Transfer Student Average Time to Degree:	2.25-2.75 years

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Center for Integrated Computing and
STEM Education (C-STEM)

— RESEARCH AND OUTREACH

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C-STEM CENTER

Research and Development to Enhance and Expand the Role of Computing and Robotics in STEM Education

- Conduct research on the role of computing and robotics to improve teaching and support student academic success in STEM.
- Develop computing/robotics technology and pedagogy to best support the classroom integration of computing/robotics and STEM education.
- Develop, assess, and disseminate teacher support materials to promote high quality instruction and student computing and STEM subject learning experiences.

Professional Development for K-14 STEM Teachers

- Offer workshops, tutorials, summer institutes and on-site professional development for STEM teachers in the areas of computing, programming in C/C++, robotics, and pedagogy for the successful integration of computing and robotics in K-14.
- Provide teachers with Common Core State Standards and CTE aligned teaching materials that include course syllabi, lesson plans, homework assignments, solutions, and video lessons.

Support C-STEM Curriculum Implementation in K-14

- The C-STEM Center supports K-14 schools to implement the C-STEM curriculum in both formal and informal programs. Teachers and administrators have unlimited access to the C-STEM website, including the discussion forum with peer C-STEM teachers and all additional projects and activities, as well as access to technical and teaching assistance and support via email. Students can participate in curriculum-based RoboPlay and Math Programming Competitions on C-STEM Day.



C-STEM CURRICULUM

Middle School

- Math 7 with Computing
- Math 8 with Computing
- Computer Programming with Ch
- Robotics and Film Production
- Afterschool Programs
- C-STEM Girls in Robotics Leadership (GIRL) Camps
- C-STEM Summer Camps

High School / Community College

- Algebra I with Computing*
- Algebra I with Computing and Robotics*
- Integrated Math I with Computing*
- Integrated Mathematics 1 with Computing and Robotics*
- Introduction to Computer Programming with C*
- Computing with Robotics*
- Introduction to Computer Programming for Engineering Applications (a UC Davis Engineering Course)

* A-G approved for UC/CSU admission



C-STEM DAY

Advocating Computing and STEM Education

- Math Programming Competition
- RoboPlay Competitions (Video and Challenge)
- C-STEM Girl's Leadership Award
- C-STEM Awards of Achievement for middle school students
- C-STEM Awards of Excellence for high school students
- C-STEM Scholarship for college bound seniors

C-STEM ANNUAL CONFERENCE on Integrating Computing and STEM Education

The Annual Conference on Integrated Computing and STEM Education is for STEM teachers to share their innovative teaching experiences and for K-14 researchers, educators and policy makers to discuss and influence the future of STEM education. Conference highlights include the presentation of the C-STEM Teacher of the Year Awards, C-STEM School of the Year Awards, C-STEM Service Awards, and C-STEM Administrator of the Year Awards.